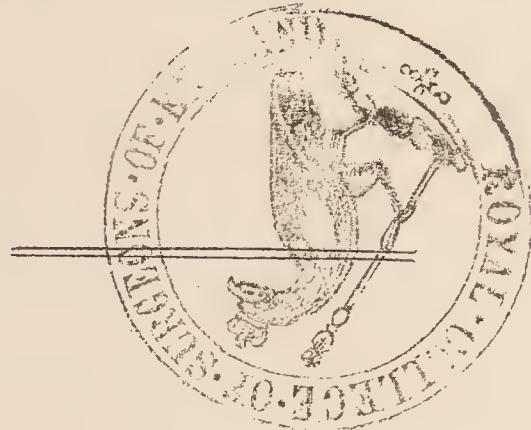


SUSSEX

COUNTY LUNATIC ASYLUM

HAYWARDS HEATH.



TWELFTH ANNUAL REPORTS

FOR 1870.

LEWES:
PRINTED BY GEO. P. BACON, HIGH STREET.

—
1871.

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COMMITTEE OF VISITORS AND OFFICERS.

1871.

EASTERN DIVISION.

1. The Earl De la Warr, Senior United Service Club, Pall Mall, London.
2. Burrell, Walter Wyndham, Esq., Cuckfield.
3. Carpenter, Charles, Esq., Brighton.
4. Darby, George, Esq., Markly, Hurstgreen.
5. Day, John, Esq., Uckfield House.
6. *Godlee, Burwood, Esq., Lewes.
7. Hankey, John Alexander, Esq., Balcombe Place, Cuckfield.
8. *Laurie, Peter Northall, Esq., Pax Hill, Lindfield.
9. Lewis, Captain William Rowe, Hollington, Hastings.
10. †Meek, Major George, Brantridge, Cuckfield.
11. †Norman, John Manship, Esq., Dencombe, Crawley.
12. †Rose-Holden, Colonel John Rose, The Ferns, Wivelsfield.
13. †Slater, James Henry, Esq., Newick Park, Lewes, *Chairman*.

WESTERN DIVISION.

1. Aldridge, Major John, St. Leonards, Horsham.
2. *†Bigg, Edward Smith, Esq., The Hyde, Crawley.
3. Carr-Lloyd, Colonel George Kirwan, Lancing, Shoreham.
4. De Bathe, General Sir Henry Percival, Bart., Chichester
5. †Dickins, Charles Spencer Scrase, Esq., Coolhurst, Horsham.
6. Fletcher, Sir Henry, Bart., Ham Manor, Arundel.
7. *Robinson, Augustin, Esq., West Lavant House, Chichester.
8. Wisden, Captain Thomas Faulconer, Broadwater, Worthing.

BRIGHTON BOROUGH.

1. Burrows, John Cordy, Esq., Brighton.
2. *Hollis, William Mellet, Esq., 7, St. George's Place, Brighton.

OFFICERS.

- Medical Superintendent*.—S. W. D. Williams, Esq., M.D.
Assistant Medical Officer.—Richard Greene, Esq., L.R.C.P.E.
Chaplain.—Revd. Thomas Edw. Crallan, M.A.
Apothecary.—Alfred H. Newth, Esq., M.B.
Clerk and Steward.—Mr. S. A. Mortlock.
Housekeeper.—Mrs. Stroud.
Head Attendants.—Mr. T. W. Buckle (Male Department).
 Miss Buckle (Female Department).
Treasurer.—George Whitfeld, Esq., Lewes.
Clerk to the Visitors.—H. Jones, Esq., Lewes.

*Member of the House and Finance Committee.

†Member of the Farm Committee.

January 28th, 1871.

SUSSEX COUNTY LUNATIC ASYLUM, HAYWARDS HEATH.

1870.

TWELFTH ANNUAL REPORT OF THE COMMITTEE OF VISITORS.

To Her Majesty's Justices of the Peace for the County of Sussex assembled in Quarter Sessions, held at Lewes, in and for the Eastern Division of the said County, on Monday, the second day of January, 1871; and at Petworth, in and for the Western Division of the said County, on Thursday, the fifth day of January, 1871.

The Committee of Visitors of the Sussex County Lunatic Asylum, appointed at the Epiphany Sessions, 1870, report,—

That the general condition and management of the Asylum, the care bestowed upon the patients, and the conduct of the officers and servants, during the year have been very satisfactory. The Court is referred to the accompanying report of the Medical Superintendent, and to the medical, financial, and domestic tables appended, for details.

The Committee think it only due to the Medical Super-
intendant, and to the officers and servants generally, to remark

Satisfactory Condition of the Asylum.

Patients seen by Committee before Discharge.

that all patients before discharge are seen by the Committee, and questioned as to the treatment they have received whilst in the Asylum; and the Committee have much pleasure in reporting that the replies, which are duly recorded in a book kept for the purpose, are invariably satisfactory, shewing as they do, that the patients are kindly treated and grateful for the care and attention shewn to them.

Resignation of
Dr. Robertson.

They desire also especially to report to the Court the resignation of Dr. Lockhart Robertson on his appointment as Visitor in Lunacy by the Lord Chancellor.

Dr. L. Robertson held the appointment of Medical Superintendent at Haywards Heath from the first opening of the Asylum, and during nearly twelve years, his zeal, his ability, his high medical attainments, and his unceasing devotion to the interests of the Asylum, contributed in no small degree to develope and maintain the excellent organization, and the thorough efficiency of the Institution in all its branches, and to raise it to the high position it now holds in public opinion.

The Committee desire to place on record their high sense of the valuable services rendered by Dr. L. Robertson to the County of Sussex, and their regret for his loss.

Appointment of
his Successor.

On the resignation of Dr. L. Robertson, Dr. S. W. Duckworth Williams, who for four years had filled the office of Assistant-Medical Officer at Haywards Heath, with the entire approval of the Committee and of Dr. Robertson, was appointed Medical Superintendent. The efficient manner in which Dr. Williams has, since his appointment, discharged the duties of his office, has gained for him the approval and confidence of the Committee. He has rendered able assistance in securing to the patients the full advantages of the improvements recently carried out in the Asylum by the

Committee, and his term of office has been marked by a more than usual number of patients reported fit for discharge as cured.

The post of Assistant-Medical officer, which thus became vacant by the promotion of Dr. Williams, was held for a short time by Dr. Patrick Nicol, late Clinical Clerk to the Wakefield Asylum, and is now filled by Dr. Greene, late Assistant-Medical Officer at the Northumberland Asylum.

In the last Report your Committee dwelt on the want of accommodation on the females side of the Asylum, and especially on the deficiency of single rooms, and they proposed a plan for rectifying these shortcomings.

This plan was submitted through the Commissioners in Lunacy to the Secretary of State for the Home Department, in December of 1869, and, having received his sanction, was approved of by the respective Courts at adjourned meetings on the 25th and 26th January last respectively.

The plan included the extension of the Asylum towards the West by a wing containing 52 single rooms, the enlargement of the Laundry, and the erection over the Laundry Ironing Room of a room to be used as a ward for the patients working in the Laundry.

The Committee having solicited and received offers, decided to give the contract to Messrs. Cheesman and Co., of Brighton; their tender (£3,600) being the lowest. They commenced the works in April, and completed them early in October last. The rooms have since been furnished and occupied by the patients, and answer well the purpose intended.

The amount for which Messrs. Cheesman contracted to

Appointment of
Assistant Medical
Officer.

Enlargement of
the Asylum.

complete the works, and the necessary outlay for furniture, and all other incidental expenses, have been defrayed, as the Committee in their Annual Report stated they would be, out of the Building Fund accumulated under the provisions of the 25th and 26th Vic., cap. 111.

Steward's Offices. The Steward's Offices and Stores having been built at the opening of the Asylum, and therefore designed for a house of 400 patients, had become very deficient in accommodation for 700. This often gave rise to considerable inconvenience, and at the meeting in May, your Committee, under the authority given them by 16 and 17 Vict., c. 97, s. 38, determined to raise the then existing Store-rooms a storey, and entirely refit the Stores and Offices throughout.

Mr. Henry Card, of Lewes, the County Surveyor, was employed to prepare the necessary plans, and the work has been completed under his superintendence for £340; the accommodation obtained amply repaying the outlay.

Death of the late Head Attendant.

The Committee regret to report that Mr. R. W. Knox died on the 13th January last. He had been Head Attendant of the Male Department from the opening of the Asylum, and received a pension from the Court at the Michaelmas Quarter Sessions for 1869, but only lived to enjoy his pension for a period of five months.

The operations of the farm and garden during the year have been on the whole satisfactory, notwithstanding the long drought in the spring and summer, and the rise in the price of all kinds of feed. The hay crop was very thin, but this deficiency has been met to a great extent by the quantity of Rye grass obtained from the land irrigated by the Asylum Sewage.

SUSSEX COUNTY LUNATIC ASYLUM, HAYWARDS HEATH.

INCOME and EXPENDITURE for the Year ending December 31st, 1870.

INCOME.							EXPENDITURE.						
HEADS OF INCOME.	QUARTERS ENDING				Year ending 31st Dec.	Total.	HEADS OF EXPENDITURE.	QUARTERS ENDING				Year ending 31st Dec.	Total of General Heads of Expenditure.
	31st March.	30th June.	30th Sept.	31st Dec.				31st March.	30th June.	30th Sept.	31st Dec.		
FROM WEEKLY RATE.							FROM WEEKLY RATE.						
From Unions Contributing to the Asylum, for Maintenance	3310 19 11	3392 0 3	3549 7 4	3558 15 0	13811 2 6	13811 2 6	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
From Unions not Contributing to the Asylum, for Maintenance	1057 11 8	1065 18 3	1079 19 2	1061 7 3	4264 16 4	4264 16 4							
From County Treasurers, for Maintenance	100 5 4	105 1 0	102 18 4	96 2 6	404 7 2	404 7 2							
Private Patients, for Maintenance	20 11 6	20 16 0	21 0 6	21 0 6	83 8 6	83 8 6							
To Accounts charged on credit side in excess of Cash paid on Farm Account	362 1 6	177 19 10	133 13 5	738 7 11	1412 2 8	1412 2 8							
Total from Weekly Rate, &c.	4851 9 11	4761 15 4	4886 18 9	5475 13 2	19975 17 2	19975 17 2							
FROM COUNTY RATE.							FROM COUNTY RATE.						
Repairs and Alterations, &c., &c.							Repairs and Alterations, &c., &c.						
From County Treasurers, for Repairs and Alterations	327 7 9	286 7 5	284 16 10	442 7 2	1340 19 2	1340 19 2	By Labour.....	135 19 10	117 14 7	139 10 0	229 19 8	623 4 1	
Improvements.....	92 4 2	....	339 1 11	....	431 6 1	431 6 1	Timber	2 9 10	9 17 7	13 9 9	82 5 8	108 2 10	
Total from County Rate	419 11 11	286 7 5	623 18 9	442 7 2	1772 5 3	1772 5 3	Iron, Lead, &c.....	16 10 7	26 5 6	43 10 8	46 0 6	132 7 3	
Total Income from Weekly and County Rate	5271 1 10	5048 2 9	5510 17 6	5918 0 4	21748 2 5	21748 2 5	Bricks, Slate, Cement, &c.	18 17 0	26 17 1	22 2 3	9 19 4	77 15 8	
				Balance	from Dec.	31st, 1869	Glass	5 5 10	2 18 4	3 18 11	8 12 0	20 15 1	
							Paints.....	24 3 9	19 13 1	9 19 1	32 17 4	86 13 3	
							Sundries.....	66 4 10	67 7 1	35 1 8	26 2 9	194 16 4	
							Insurance and Taxes	28 17 1	12 11 0	....	....	41 8 1	
							Carriage and Carting	8 19 0	3 3 2	17 4 6	6 9 11	35 16 7	
							Superannuation	20 0 0	....	....	....	20 0 0	
							Total ..	327 7 9	286 7 5	284 16 10	442 7 2	1340 19 2	1340 19 2
							Improvements	92 4 2	....	339 1 11	....	431 6 1	431 6 1
							Total from County Rate	419 11 11	286 7 5	623 18 9	442 7 2	1772 5 3	1772 5 3
							Total Expenditure from Weekly and County Rate	5070 10 2	5387 2 7	6058 14 7	6005 4 5	22521 11 9	22521 11 9
												Balance	5873 8 8
													Total..£ 28395 0 5

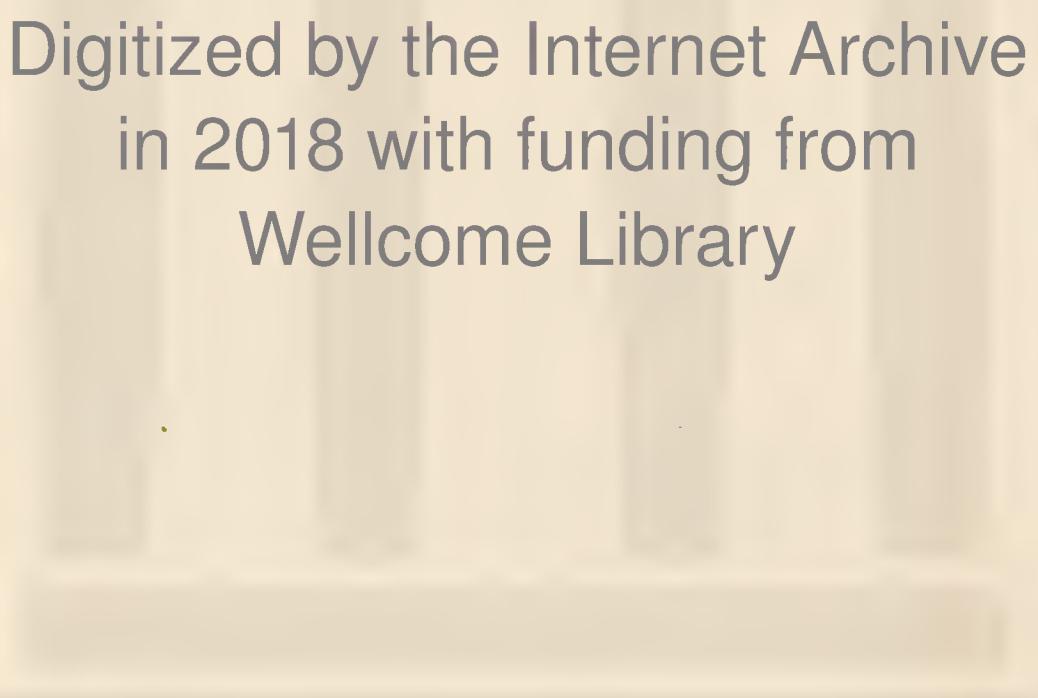
Examined by the Finance Committee, January 25th, 1871.

ined by the
(Signed)

gned)
JAMES H. SCLATER, *Chairman.*
P. NORTHALL LAURIE.
W. M. HOLLIS

(Signed)
S. A. MORTLOCK,
Clerk and Steward of the Asylum.

		QUARTERS ENDING				Average for the Year 1870.
		March 31st.	Juno 30th.	Sept. 30th.	Dec. 31st.	
Provisions..	.. .. .. ..	s. d. 4 1½	s. d. 4 4½	s. d. 4 10	s. d. 3 0½	s. d. 4 1½
House and other Expenses	.. ..	1 10½	1 8½	1 7½	1 9½	1 8½
Clothing	.. .. .. ..	0 5½	0 7½	0 4½	0 7½	0 6½
Salaries and Wages	.. .. ..	2 1½	2 0	1 11½	1 11½	2 0½
Medicine, Wine and Spirits	.. ..	0 3½	0 3½	0 3	0 3½	0 3½
Incidentals	.. .. .. ..	0 0½	0 0½	0 0½	0 0½	0 0½
Total	..	8 11½	9 0½	9 0½	7 9½	8 8½
Weekly Rate charged to the Unions contributing to the Asylum..	..	9 9	9 9	9 9	9 9	9 9
Do. do. Not contributing do.		14 0	14 0	14 0	14 0	14 0
Do. do. for Private Patients..		16 0	16 0	16 0	16 0	16 0



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The Lunacy Committee of the Brighton Board of Guardians have visited the Asylum, and seen all their patients regularly every quarter. Many others of the Boards of Guardians in the County have done likewise, once or twice a year, and they have always, without exception, expressed themselves well satisfied with the care and attention bestowed on their respective patients.

JAMES H. SCLATER,

Chairman.

Haywards Heath, 31st December, 1870.

SUSSEX COUNTY LUNATIC ASYLUM, HAYWARDS HEATH.
BALANCE STATEMENT for the Year ending December 31st, 1870.

ASSETS.		£ s. d.
1870.	To Unions, in Arrears	4 18 11
"	Uckfield	25 8 5
"	Hailsham	12 13 6
"	Rye	<u> </u>
Dec. 31.	Due from Unions Contributing	3558 15 0
"	Ditto not Contributing	1061 7 3
"	Ditto, County Treasurers	96 2 6
"	Ditto, Private Patients	21 0 6
"	For Repairs, Alterations, &c.	442 7 2
"	Ditto, Sale of Stores, &c.	433 14 1
"	Cottage Rent	1 12 6
"	Cash in Banker's hands	3043 15 5
"	Ditto Steward's	193 17 6
		<u> </u>
		£8895 12 9
1870.	To Amount due to Sundry Tradesmen on account of Maintenance, Repairs, &c.	2528 7 1
"	Ditto on Cheques not paid in	301 7 0
"	Ditto to Salaries on ditto	192 10 0
Dec. 31.	Surplus Balance	5873 8 8
		<u> </u>
		£8895 12 9
(Signed)	JAMES H. SCLATER, Chairman.	(Signed)
	P. NORTHALL LAURIE.	S. A. MORTLOCK,
	W. M. HOLLIS.	Clerk and Steward of the Asylum.
	Examined by Finance Committee, 25th January, 1871.	

FARM AND GARDEN ACCOUNT.

From 1st January to 31st December, 1870.

Cr.

Dr.

1869.—December 31:—		£ s. d.	£ s. d.	1870.—December 31:—	£ s. d.
To Estimated Value of Live Stock	1142 2 0			By Sale of—	£ s. d.
Estimated Value of Dead ditto	385 1 6			15 Calves and 18 Pigs..	45 0 0
Tenants' Valuation	691 17 0			Discount.....	3 2 3
Estimated Value of Provender	360 16 0			3 Quarters Peas	6 15 0
		2579 16 6		Hides and Skins	142 4 9
				Rough Fat, &c.	41 4 11
				142 qrs. 3 bus. Wheat..	366 14 0
				Sundries.....	24 0 6
				Faggots	4 15 0
				Poultry	16 4 0
				Use of Stock	6 15 0
					656 15 5
				By Produce Supplied to House:—	
1 Bull	15 0 0			26,191 lbs. Beef ..@ -/7½	791 3 8½
68 Cows and Beasts	1560 9 10			31,114 „ ditto ..@ -/7½	1004 14 5½
10 Calves	47 1 3			81 Livers ..@ -/9	3 0 9
474 Sheep	1097 7 10			8,933 lbs. Pork ..@ -/7	260 10 11½
2 Horses	45 0 0			2,738 „ ditto ..@ -/7½	82 14 2
Oil Cake	224 13 7			8,494 „ ditto ..@ -/7½	265 8 8½
Bran	40 17 8			13,711 lbs. Mutton @ -/8	457 0 8
Oats	31 5 0			17,820 „ ditto ..@ -/8½	622 11 2½
Barley and Maize.....	332 6 0			472 Bells ..@ -/11	21 12 8
3335 Truss Straw	141 16 2				3,498 17 4
Seeds and Plants	73 14 5			16,703 gallons. Milk ..@ -/11	765 11 1
Manure and Lime ...	31 14 11			6,580 Eggs ..@ -/1	27 8 4
Implements	61 19 7			118 Poultry ..@ 2/-	11 16 0
Wages of Bailiff, Gardner, Cowman, Carter, and other Servants employed on Farm	384 11 6			109 Rabbits ..@ -/10	4 10 10
Thrashing	20 4 10			10 Geese ..@ 7/-	3 10 0
Repairs	32 10 2			2,626½ lbs. Butter (not charged).....	0 0 0
Valuation	6 6 0				812 16 3
Sundries	100 0 5				
		4246 19 2		1,917 bus. Cabbage @ 1/-	95 17 0
				84 „ Onions @ 2/-	8 8 0
				1,763½ „ Potatoes @ 2/8	235 2 8
				169 „ Peas ..@ 2/-	16 18 0
				287 „ Beans ..@ 2/-	28 14 0
				361 „ Carrots @ 2/-	36 2 0
				317 „ Parsnips @ 2/-	31 14 0
				291 „ Turnips @ -/10	12 2 6
				3,760 Cauliflowers @ -/2	31 6 8
				Other Vegetables	35 11 5
				Fruit and Rhubarb	32 13 7½
				Vegetables and fruit supplied to Medical Superintendent.....	24 11 5½
					589 1 4
Rates and Taxes	42 14 6			Carting Coals, &c.	62 15 6
2032 Bushels of Grains, at 4d. per Bushel	33 17 4			Keep of House Horse ..	23 8 0
Estimated Rent on Land	150 0 0			Underwood supplied for Fires	15 8 0
		226 11 10			101 11 6
Balance in favour of Farm	1268 18 11			By Estimated Value of Live Stock	1155 2 0
				„ Dead ditto ..	448 14 4
				„ Tenants' Valuation	697 11 7
				„ Provender ..	361 17 0
					2663 4 7
					£8,322 6 5

ESTIMATED VALUE OF FARM STOCK:—

1869.—December 31:—		£ s. d.	1870.—December 31:—	£ s. d.
27 Cows and Fatting Beasts.....	552 0 0		29 Cows and Fatting Beasts ..	596 0 0
6 Horses	157 0 0		8 Horses.....	211 0 0
15 Sheep	32 5 0		18 Sheep	38 0 0
139 Head of Swine	373 10 0		106 Head of Swine	285 10 0
Head of Poultry	27 7 0		173 Head of Poultry	23 14 0
	1142 2 0		Ferrets	0 18 0
Dead Stock, Implements, &c.....	385 1 6			1,155 2 0
Tenants' Valuation	691 17 0		Dead Stock, Implements, &c.	448 14 0
Provender	360 16 0		Tenants' Valuation	697 11 7
	£2579 16 6*		Provender	361 17 0
				£2,663 4 7*

Examined by Farm Committee, January 25th, 1871.

(Signed) JAMES H. SCLATER, Chairman.

(Signed) S. A. MORTLOCK, Clerk and Steward.

*The above Valuation made by Mr. J. Agate, of Slaugham, Crawley.

An Abstract of the Annual Returns of Pauper Lunatics chargeable to the several Unions and places in the County of Sussex, 1st Jan., 1871.

UNIONS.	In County Asylum.		In Private Asylum.		In Asylums in other Counties.		In Work-houses.		In Lodgings or Boarded out.		With Friends.		TOTAL.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Battle	7	12	..	..	..	..	7	3	..	..	1	1	15	16
Brighton (Parish)	66	73	..	..	..	..	37	39	..	1	15	12	118	125
Chailey	11	10	..	..	..	..	1	..	1	..	1	4	14	14
Chichester (Incorporatn)	11	6	..	..	..	..	..	1	1	..	1	3	13	10
Cuckfield	14	18	..	..	1	..	4	3	..	1	1	5	20	27
Eastbourne	7	13	..	..	..	1	1	1	..	..	1	1	9	16
East Grinstead	11	7	..	..	..	1	9	9	..	..	..	4	20	21
East Preston	9	15	..	..	..	..	2	4	..	..	6	5	17	24
Hailsham	8	14	..	..	..	..	4	5	..	..	3	7	15	26
Hastings	13	25	..	..	1	..	3	2	..	..	2	2	19	29
Horsham	13	24	..	..	1	..	3	14	..	..	7	11	23	20
Lewes	6	13	1	..	..	..	3	5	..	..	..	1	10	19
Midhurst	10	8	..	..	..	..	2	2	..	2	7	5	19	17
Newhaven	4	5	..	..	..	..	3	5	..	..	..	..	7	10
Petworth	6	8	1	..	1	..	5	5	..	..	3	1	16	14
Rye	10	10	..	..	..	..	5	6	..	..	3	6	18	22
Steyning	10	21	..	..	..	..	5	4	..	..	4	6	19	31
Thakeham	2	6	..	..	..	..	2	2	..	..	..	3	4	11
Ticehurst	9	15	..	..	..	..	7	3	1	..	4	3	21	21
Uckfield	17	10	..	..	..	..	3	3	2	..	8	8	30	21
Westbourne	5	7	..	..	..	..	3	2	..	..	1	3	9	12
Westfirie	3	2	..	..	..	..	..	..	..	..	1	1	4	3
Westhampnett	18	23	..	..	..	..	7	2	..	..	5	5	30	30
TOTALS.....	270	345	2	1	3	2	116	120	5	4	74	97	470	569

SUMMARY.

Years.	In Asylums.		In Workhouses.		With Friends.		TOTALS.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.&F.
1st January, 1855.	92	127	79	54	45	85	216	266	482
1st January, 1868.	242	301	95	107	62	84	399	492	891
1st January, 1869.	250	318	102	110	67	84	419	512	931
1st January, 1870.	246	326	109	108	72	83	427	517	944
1st January, 1871.	275	348	116	120	79	101	470	569	1039

S. A. MORTLOCK,

Clerk of the Asylum.

THE
MEDICAL SUPERINTENDENT'S
TWELFTH ANNUAL REPORT.

THE Medical Superintendent has the honour to submit the Twelfth Annual Report. Twelfth Annual Report to the Committee of Visitors.

On the 31st December, 1869, the numbers in the Asylum were 318 Male, 332 Female. Total, 650. Numbers on the 31st Dec., 1869.

The admissions during the year have been, Male 83, Admissions. Female 83. Total 166.

The discharges during the year have been, Male 34, Discharges. Female 34. Total 68.

The deaths during the same period have been, Male 28, Deaths. Female 29. Total 57.

The mean population resident during the year has been, Mean Annual Population. Male 332, Female 344. Mean Average 676.

The numbers in the Asylum this day (31st December, 1870) are Male 339, Female 352. Total 691. Numbers this day 31st Dec., 1870.

The several numerical results are summed up in the first Table in Appendix A to this Report. Numerical results of the year.

The Numerical Results of the year 1870 yield the following per centages:— Annual per centages for 1870.

(a.) The Discharges (including the cases Relieved) are 41. per cent. on the admissions of the year. Excluding those cases Relieved, the per centage of Recoveries stands at Male 34.9, Female 38.5. Average 36.7.

Mean Annual Mortality.

(b.) The mean Annual Mortality is Male 8.4, Female 8.5. Average 8.4.

New Works, Alterations, and Improvements.

During the past year several very important alterations and improvements have been made in the Building, which have added greatly to the powers of classification, and therefore to the facility for managing the Asylum.

The chief of these are as follows :—

1. The ceilings of the Workshops have been raised and more air and light admitted, and a day room, 60ft. by 30ft., built over them to accommodate the 50 male patients who work in the shops below.
2. The Ironing-room at the Laundry has been made fully as large again. Over this a laundry day ward has been built, which will accommodate 50 patients.
3. At the extreme west end of the Asylum a four-story building has been raised, containing 13 single rooms in each story. The ground floor is in connection with the ward for acute cases, and the first floor is a continuation of the Infirmary; so that each of these wards gains 13 single rooms—a great aid to their efficient working.
4. The Stores have been raised a story, and otherwise improved and refitted, so that now nearly all the stores, materials for artisans, &c., &c., can be kept under one roof and immediately under the eye of the Steward. This is a great improvement, and will, I believe, tend materially to economy in the working of the Asylum.

5. The Front Gates have been moved from their old position opposite the Chapel, to a position flush with the high road, whilst the rising ground on each side has been levelled, laid down in turf, and planted. This alteration has relieved the cramped appearance of the entrance. It has been effected chiefly by patients, and therefore has cost but little.

6. The ground in front of the new wing has been laid out as a terraced garden for the Female Infirmary patients. During this work and the preceding one, 3,000 tons of earth were moved by the patients, under the direction of the gardener.

These alterations and additions to the Asylum give the Accommodation. following accommodation :—

Males, single rooms 66 ; associated beds, 311. Total, 377.

Females, single rooms, 99 ; associated beds, 296. Total, 395.

So that the Asylum will now accommodate 772 patients.

There are now in the Asylum 279 Male, and 352 Female Patients chargeable to the County and boroughs of Sussex. So that the County may be congratulated on possessing empty beds for 141 patients, viz., 98 Males, 43 Females.

On the Males side this will in all probability suffice for many years, but on the Females side, judging from the rate of increase for the last few years, the Committee will have again to consider the question of further accommodation in about three years.

In this Asylum, and indeed in nearly every Asylum in England, the Female population exceeds the Male, the proportion being about 7 men to 9 women ; therefore to render the proportional accommodation in this Asylum complete, we

require about 40 more beds on the Females side, which would give a total of rather more than 800 beds. When this is accomplished, it will become a question, very seriously to be considered, whether it will be advisable further to increase this Asylum.

Accidents.

One of the labourers working for the Contractors on the new buildings fell from a ladder on the 20th September, and was killed on the spot. This is the only accident of any kind that has occurred amongst the labourers all the year, notwithstanding the large amount of building that has been going on.

Inquests.

Three Inquests have been held on patients during the year:—

(1.) Sarah Lucas, an old woman, was admitted from Cuckfield, on July 2nd, in a state of acute melancholia, and very feeble. She was very restless, and it was necessary to have one or two nurses constantly with her to prevent her injuring herself, especially as she had a trick of throwing herself violently to the ground. On July 17th, it was discovered that the fourth and fifth ribs on the right side were broken four inches from the sternum. The most careful enquiry failed to elicit the cause of this fracture, and it could only be conjectured that she did it by violent muscular action, or when throwing herself about. The melancholia continued very acute, abscess formed on her neck and face, and she was attacked with most intractable diarrhœa. This complication of ailments so thoroughly exhausted her that she died on the 25th July. The Coroner held a careful enquiry, and the jury returned the following verdict:—

“ That deceased died from exhaustion consequent on diarrhœa, accelerated by the fracture of two ribs on the right side, and the jury further say that such fracture of the ribs

was occasioned by the action of deceased, and is not attributable to improper treatment or neglect of deceased by any of the attendants or officers of the Asylum."

(2.) John Carter, a case of general paralysis, was admitted on 27th June. The paralysis was far advanced, and he was in a very feeble state. On July 27th he became much worse, and gradually lapsed into a state of coma. On examining his chest a fracture of the sixth rib on the right side was detected ; there was no displacement of the fractured bone, and there was no bruise on any part of his body. The cause of this fracture is involved in as much mystery as that of the preceding case. He died on the 29th inst. An inquest was held, and the verdict of the jury was—

"That deceased John Carter, an innkeeper, aged about 46 years, died on the 29th day of July last from natural causes, to wit, general paralysis of the insane, and that he received every attention whilst in the Asylum. The jurors further say that deceased had a fracture of the sixth rib on the right side, and that such fracture arose from the diseased state of the bone, and is not attributable to neglect or improper treatment on the part of any of the officers or attendants of the Asylum."

(3.) Emery Churcher Clayton, a case of dementia, was found dead on the evening of 24th September, sitting on a form in the day-room between two patients. On enquiry it was found that he had been at work in the Cemetery during the morning, and that the attendant out with him had seen him eating yew-berries, and had checked him. A post-mortem examination revealed a large mass of these berries half digested in his stomach, and as all the symptoms of death by some irritant poison were present, there was no doubt that the yew-berries caused his death. It can only, however, be

in large quantities that they are poisonous, as many of the patients have for years been in the habit of eating occasionally a small number, and this man is known often to have done so.

The Coroner held an inquest on the 27th September, and the verdict of the jury was—

“That E. C. Clayton died in consequence of eating yew-berries on the 24th September, 1870.”

Remarks.

The two first of these cases caused the Medical Superintendent much anxiety, and he did all in his power to promote a full and searching enquiry. At his request F. W. Jowers, Esq., F.R.C.S., Surgeon to the Brighton Hospital, made a most careful post-mortem examination, and Dr. Ormerod, who has made the study of diseased bones the subject of careful investigation, was asked to examine, microscopically, and report on, the condition of the bones in both cases. This he did, and both he and Mr. Jowers gave evidence at the inquests. Considering the history of these cases, and the evidence of Dr. Ormerod and Mr Jowers on them, of great importance not only to the medical profession but also to the public at large, the Medical Superintendent sent a *résumé* of the evidence at the two inquests, with some explanatory remarks of his own, to “*The Lancet*.” This paper, together with a paper since published by Dr. Ormerod, the Medical Superintendent is enabled by the courtesy of the Committee of Visitors to publish in an appendix to this report. (See Appendix B.)

Escapes.

F. R., a patient suffering from harmless chronic mania, escaped from the Garden Working Party on the 8th September, and managed to elude the vigilance of ourselves and the police so long that at the end of two weeks it was neces-

sary, according to the statute, to discharge him. On November the 2nd he returned to the Asylum of his own accord, and begged to be taken back. He was in a deplorable state of filth and dirt, and half famished. He was delivered over to the police, who obtained the necessary papers for his readmission, and he has remained with us ever since—glad to be back in his old quarters.

The eleventh commemoration of the opening of the Asylum Commemoration. was held on the 2nd of August. The annual sermon was preached by the Revd. E. A. Willett, M.A., Trin. Coll. Cantab. *Eclat* was given to the day's proceedings by the presence of our kind Chairman, with other Visiting Justices and ladies and gentlemen residing in the neighbourhood.

The sanitary condition of the Asylum during the last twelve months has been even more than usually good, both amongst the patients and staff. There were scarcely any chest affections during the severe weather of the early spring. There was absolutely no diarrhoea during the unprecedented drought of the summer; and although scarlet fever and other zymotic diseases have been very prevalent in the neighbourhood during the autumn, the patients in this Asylum were mercifully spared from them. Sanitary Condition of the Asylum.

The amusements have been kept up fully to the standard Amusements. during the past year, and appear to have been appreciated by many of the patients. At the same time, as there are a still greater number who cannot take any part in them, care has been taken not to run into excess, and for the sake of effect sacrifice the greater number for the smaller. During the summer when excursion trains ran to the Crystal Palace, small parties of ten patients were sent. Frequent pic-nics of about sixty of each sex were held in the neighbourhood. The male

patients took up with cricket very energetically, and matches were arranged with the neighbouring clubs, in which the Asylum Cricket Club fairly held its own. The weekly balls have been kept up regularly through the winter months. Lecturers, comic vocalists, nigger melodists, &c., visiting the neighbourhood, have been occasionally engaged. The officers and attendants have got up some very successful "Penny Readings," interspersed with vocal and instrumental music, in which ladies and gentlemen in the neighbourhood have been good enough to assist. Mr. Mortlock has kindly exhibited the magic lantern belonging to the Asylum on several occasions, and at Christmas a theatrical performance, well arranged by the Head Attendant, was given.

Donation of Pictures.

Thanks are due to Dr. Lockhart Robertson for a donation of very fine prints, to be hung up in the new Female Infirmary.

Appointment of Assistant Medical Officer.

Dr. Nicol, who was appointed Assistant Medical Officer in April last, resigned that office in July. Since then Dr. Greene has been appointed, and entered on his duties the 20th October. Although Dr. Greene's time with us has been as yet but short, the Medical Superintendent believes he may congratulate the Visitors on having obtained in him an efficient and praiseworthy Assistant Medical Officer.

Conclusion.

The present Medical Superintendent would take this opportunity of thanking the officers, one and all, for the great consideration they have shown him, and the help they have afforded him in his initiation into his new office. To succeed to the work of a man so successful and energetic as Dr. Robertson was no light undertaking; and in his endeavours to keep the reputation of the Asylum up to the same standard as Dr. Robertson, the Medical Superintendent

strongly feels how indebted he has been all through the year to the kindness and forbearance of the Committee of Visitors, to whom he respectfully tenders his thanks.

(Signed),

S. W. D. WILLIAMS, M.D.,

Medical Superintendent.

Haywards Heath,

31st December, 1870.



THE CHAPLAIN'S TWELFTH ANNUAL REPORT.

Twelfth Annual Report. THE Chaplain desires to lay before the Committee of Visitors his report for the twelfth year of the existence of this Asylum.

Sunday Services. The Sunday Services during the past year have continued the same as during the previous year. The 8 p.m. service has been well attended by the members of the household.

Daily Progress: The morning prayers in the dining halls have been continued, and the behaviour of the patients has been orderly and reverent, with few exceptions.

Burials. 45 Burials and 13 Removals have taken place.

Commemoration Day. The Commemoration was kept on 28th July. The sermon was preached by the Revd. E. A. Willett; the lessons were read by the Revd. J. Foster, vicar of the parish.

The Choir was led by Mr. White, of Cuckfield, as usual.

Classes. The classes have been continued as usual, and with apparent benefit and interest to a number of the patients.

Library. The Library has been managed as formerly, and is evidently appreciated by many of those who have access to it.

Visits to Wards, &c. The Chaplain has regularly visited the patients in the wards, as well as those employed in the workshops, laundries, &c., and those in the infirmaries, and has reason to believe his visits are a source of comfort to many of the inmates.

Conclusion. The Chaplain desires to express his thanks to the Medical Superintendent, and the staff generally, for the support he has received in the performance of his duties.

(Signed) THOMAS E. CRALLAN, M.A.,
Chaplain.

Haywards Heath, December 31st, 1870.

METEOROLOGICAL REPORT.

THE year 1870 has been marked by an unusual drought. The rainfall has amounted to only 21.80 inches, as against 31.61 inches in the previous year, which was not remarkable for moisture. This great drought, though commencing early in the year, was not generally noticed for some time, owing to the cloudy weather which prevailed during the month of March, and prevented the dryness of atmosphere and consequent evaporation from the soil which would otherwise have been experienced.

During the months of April, May, and June the dryness was excessive, and the hay crops correspondingly short. The suffering for want of water was very great, all the surface wells being dry for a very long period.

There were several remarkable displays of aurora in the autumn ; that, however, on the 24th October was the most brilliant. It was noticed in many parts of Europe, and as far south as the Cape of Good Hope. No such aurora has been seen since October 24th, 1848.

The spots on the Sun's disc have been very large and numerous this year, and occasionally visible to the naked eye.

The winter set in with great severity, the thermometer on the grass going down to 9° on one occasion.

Displays of aurora, numbers of sun spots, and severe winters have occurred in the same year on former occasions, as in 1860.

October was the wettest month in the year, the rainfall for that month reaching 4.33 inches.

The greatest rainfall in the twenty-four hours occurred on October 22nd, and amounted to 1.16 inches.

The usual table is annexed.

THOMAS E. CRALLAN.



Meteorological Observations taken at the County Lunatic Asylum during 1870.

(Signed)

THOMAS E. CRALLAN, M.A.,

Chaplain.

REPORT BY THE VISITING COMMISSIONERS IN LUNACY.

SUSSEX COUNTY ASYLUM,

21st June, 1870.

IN the course of our visits to the Asylum yesterday and this day, we have inspected the several wards, workshops, offices, and premises, including the additions in progress, and with the exception of two out of three in the male division, absent on trial, have seen all the patients on the books.

We have to record the following as the changes in the patients since the visit of our colleagues, 17th June, 1869, and their present numbers :—

	M.	F.	TOT.
Admitted	68	84	152
Discharged and removed .	30	35	65
,, of whom recovered	25	29	54
Died	25	31	56
	—	—	—
Present number on books .	335	346	681

The deaths have all been from ordinary causes, excepting in the case of one female patient, who hung herself, under circumstances fully reported at the time to our office.

In all cases wherein permission is previously given by the relatives *post-mortem* examinations are made, and, in fact, there are few cases in which they are not made.

Of the patients absent on leave is a little boy, who is under the charge of the wife of one of the male attendants in the immediate neighbourhood. He was brought to us, and was well dressed and evidently under proper care. Sixty of the male patients are from Hanwell Asylum, and the weekly sum charged for their maintenance is 14s., the ordinary charge at present being 9s. 9d.

Two of the male and one of the female patients are of the private class.

The sanitary state of the Asylum is very satisfactory.

The patients registered as under medical treatment, are 63 in the male division, and 86 in the female. Of the former 5 only, and of the latter 6, are under treatment for physical ailments. The remainder are taking medicine on account of their mental affection.

The case books are well kept, being regularly entered up by Dr. Newth, the Apothecary and Dispenser, who transcribes therein, from day to day, the notes made by the medical officers on their visits to the wards.

We have to report most favourably, as upon previous visits, of the personal condition as to dress and otherwise, and the demeanour of the patients of both sexes, who were without exception quiet and orderly.

According to the medical journal the patients placed in seclusion since the last visit have been 29 in the male division, and 28 in the female, the former altogether on 107, and the latter on 130 occasions.

The attendance at Divine Service in the Chapel on Sundays averages 240 on the male side, and 200 on the female.

The week-day morning prayers, which are read by the Chaplain in the respective divisions, are attended by about 260 men and 285 women.

The ward returns relative to employment shew the following results :—

	M.		F.
Agriculture	64	Sewing and Knitting	114
Trades	61	Laundry	51
Wards, &c. . . .	138	Kitchen and Offices :	25
	<hr/>	Wards, &c. . . .	66
Total . .	263		<hr/>
		Total . .	256

We this day saw the patients, to the number of about 280 men and 290 women, at dinner in their respective halls. The demeanour was most orderly, and the dinner was good, ample, and comfortably served. It consisted in the female hall of excellent fresh mackerel, and in the male hall partly of mackerel and partly of meat pudding; in all cases with bread and beer. In accordance with a suggestion made at the last visit, meat-pudding has been substituted for one of the dinners of soup.

We have to report the following additions and improvements since the last visit :—

(1) *Structural—Completed.*

(1) The enlargement of the tailors', shoemakers', and upholsterers' shops.

(2) The erection of an excellent spacious day-room over the workshops for 50 patients employed as artisans.

Ditto in Progress.

(1) The enlargement of the laundry, and raising it a story.

(2) The erection of a day-room over the laundry for 50 women, with sleeping rooms for laundry-maids.

(3) The erection of a block of three storys, containing 50 single rooms in connection with the female infirmary and ward for acute cases, with special rooms for the sick.

(2) Other Improvements.

(1) Painting, papering, and colouring female wards, Nos. 1 and 4.

(2) Ditto, male infirmary.

(3) Painting and refitting the Turkish bath.

(4) Painting and fitting the mess-room for nurses.

(5) Ditto scullery to female dining hall.

(6) Ditto new needle and work room.

As respects the staff of attendants, we have to report as follows :—

In the male division 23 attendants have charge of the patients in the Asylum during the day, and there are also 12 artisans and 8 farm and garden servants, all of whom have charge of a large number of patients.

The female day attendants are 22 in number ; these do not include the 4 laundry maids and 5 servants in the kitchen.

There are in each division a head and two night attendants.

As directed by the Act, we have made enquiries upon the subject of Visitation and Management, and have ascertained that the Committee of Visitors regularly perform all their statutory duties.

Since the last visit Dr. Robertson, who for so many years ably discharged the duties of Superintendent, and to whom is mainly due the excellent condition of the Asylum—to which ample testimony has been borne in previous reports—has, upon his appointment as one of the Visitors in Lunacy, resigned, and been succeeded as Superintendent by Dr. Williams, who has for four years efficiently acted as Assistant Medical Officer. Dr. Nicol has been appointed as his successor in this office.

R. W. S. LUTWIDGE, } Commissioners
ROBERT NAIRNE, } in Lunacy.



APPENDICES

TO THE

MEDICAL SUPERINTENDENT'S

TWELFTH ANNUAL REPORT.

APPENDIX A.

CONTAINING THE

TABLES OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION, &c.

The Medical Superintendent desires to acknowledge the services rendered to him by the Steward and Clerk of the Asylum (Mr. Mortlock) in the compilation of these Tables.

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TABLE I.

Showing the Admissions, Re-Admissions, Discharges, and Deaths during the Year 1870.

	Male.	Female.	Total.
In the Asylum, 1st January, 1870 ..	318	332	650
	M.	F.	T.
Admitted for the first time during the year	76	71	147
Re-Admitted during the year	7	12	19
Total Admitted.....	83	83	166
Total under care during the year	401	415	816
Discharged or Removed :			
	M.	F.	T.
Recovered.....	29	32	61
Relieved	5	2	7
Not Improved	0	0	0
Died	28	29	57
Total Discharged and Died during the year	62	63	125
Remaining in the Asylum, Dec. 31st, 1870 (inclusive of absent on trial), Male, 1	339	352	691
Average numbers resident during the year	332.3	344.1	676.4

TABLE II.

Showing the Admissions, Re-Admissions, and Discharges, from the Opening of the Asylum to the present date, 31st December, 1870.

	Male.	Female.	Total.
Admitted during the Period of $11\frac{1}{2}$ years	934	883	1817
Re-Admissions	43	75	118
Total of Cases Admitted	977	958	1935
Discharged or Removed :			
	M.	F.	T.
Recovered.....	174	449	423
Relieved	54	52	106
Not Improved	66	39	105
Died	344	266	610
Total Discharged and Died during the $11\frac{1}{2}$ years	638	606	1244
Remaining, December 31, 1870	339	352	691
Average numbers resident during the $11\frac{1}{2}$ years	243	278	521

TABLE III.

Showing the Admissions, Discharges, and Deaths, with the Mean Annual Mortality and proportion of Recoveries per cent. of the Admissions for each Year since the Opening of the Asylum.

TABLE IV.

Showing the History of the Asylum since the Opening of the Asylum, with the Discharges and Deaths, and the Numbers of each year remaining on the 31st December, 1870.

TABLE V.

Showing the Causes of Death during the Year.

CAUSES OF DEATH.	Male.	Female.	TOTAL.
<i>Cerebral or Spinal Diseases.</i>			
Inflammation and other Diseases of the Brain, Softening, &c.	6	4	10
Epilepsy	3	1	4
General Paralysis of the Insane ...	4	5	9
Maniacal or Melancholic Exhaus- tion or Decay	4	3	7
<i>Thoracic Diseases.</i>			
Inflammation of Lungs, Pleuræ or Bronchi	1	”	1
Pulmonary Consumption	2	5	7
Disease of the Heart	2	3	5
<i>Abdominal Diseases.</i>			
Peritonitis.....	1	”	1
Cellulitis	1	”	1
Diarrhœa	”	2	2
Ascites	”	1	1
Decay of Idiocy	”	1	1
Decay of Old Age	2	4	6
Pyæmia	1	”	1
Poisoned by eating Yew Berries	1	”	1
TOTAL.....	28	29	57

TABLE VI.

*Showing the length of Residence of those Discharged Recovered,
and in those who have Died during the year 1870.*

Length of Residence.	RECOVERED.			DIED.			Total.
	Males.	Females.	Total.	Males.	Females.		
Under 1 month	„	„	„	7	2		9
From 1 to 3 months	6	4	10	4	3		7
„ 3 „ 6 „	10	12	22	4	4		8
„ 6 „ 9 „	3	6	9	„	1		1
„ 9 „ 12 „	3	2	5	„	„		„
„ 1 „ 2 years	2	5	7	4	4		8
„ 2 „ 3 „	3	1	4	1	4		5
„ 3 „ 5 „	2	2	4	2	1		3
„ 5 „ 7 „	„	„	„	2	1		3
„ 7 „ 10 „	„	„	„	2	4		6
„ 10 „ 13 „	„	„	„	2	5		7
TOTAL	29	32	61	28	29		57

TABLE VII.

Shewing the Duration of the Disorder on Admissions, Discharges, and Deaths during the Year 1870.

Duration of Disease on Admission in Four Classes.

CLASS.	The Discharges.				The Deaths.				
	The Admissions.		Recovered.		Removed, Relieved, or otherwise.				
	Male.	Femal.	Total.	Male.	Femal.	Total.	Male.	Femal.	Total.
FIRST CLASS— First attack, and within three months on admission.....	34	35	69	15	14	29	3	3	10
SECOND CLASS— First attack, above three and within twelve months on admission.....	8	6	14	1	1	2	...	...	1
THIRD CLASS— Not first attack, and within twelve months on admission.....	16	30	46	7	14	21	...	1	5
FOURTH CLASS— First attack or not, but of more than twelve months on admission	19 6	9 3	28 3	3 3	3 ...	6 3	2 ...	3 ...	4
	83	83	166	29	32	61	5	2	7
	TOTAL.....								28
									29
									57

TABLE VIII.
Showing the Ages of the Admissions, Discharges, and Deaths during the Year 1870.

AGES.	The Admissions.						The Discharges.						The Deaths.								
	Recovered.			Removed, Relieved, or otherwise.			Total.			Female.			Male.			Female.			Male.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			
From 5 to 10 years.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
,, 10	15	15	30	6	6	12	13	13	26	2	2	15	9	10	10	1	1	2	2	6	8
,, 15	20	20	40	7	7	14	22	22	44	5	5	34	5	5	10	1	1	1	1	4	8
,, 20	30	30	60	13	13	35	35	35	70	10	10	50	10	10	17	2	2	1	1	6	12
,, 30	40	40	70	20	20	40	14	14	28	5	5	34	5	5	10	1	1	2	2	4	8
,, 40	50	50	80	12	12	24	19	19	38	7	7	31	7	7	17	2	2	1	1	6	12
,, 50	60	60	120	10	10	22	12	12	34	5	5	50	10	10	17	8	8	1	1	3	5
,, 60	70	70	140	8	8	16	11	11	22	3	3	60	3	3	10	5	5	1	1	7	10
,, 70	80	80	160	5	5	10	1	1	16	2	2	80	8	8	10	3	3	1	1	4	6
,, 80	90	90	180	1	1	2	1	1	18	2	2	90	1	1	10	1	1	1	1	2	3
,, 90 and upwards.....	.....	.....	.....	5	5	10	3	3	10	8	8	90	4	4	10	4	4	3	3	2	5
,, Not ascertained .....	.....	.....	.....	5	5	10	3	3	10	8	8	90	4	4	10	4	4	3	3	2	5
TOTAL.....	83	83	166	29	29	58	61	61	166	2	2	166	29	29	58	7	7	28	28	57	

TABLE IX.

Condition as to Marriage in the Admissions, Discharges, and Deaths during the Year 1870.

Condition in Reference to Marriage.	The Discharges.						The Deaths.					
	The Admissions.			Recovered.			Removed, Relieved, or otherwise.			The Deaths.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Single.....	35	28	63	10	9	19	2	2	4	8	10	18
Married	33	44	77	14	20	34	3	0	3	14	11	25
Widowed	10	9	19	1	3	4	0	0	0	3	6	9
Not ascertained	5	2	7	4	0	4	0	0	0	3	2	5
TOTAL.....	83	83	166	29	32	61	5	2	7	28	29	57

TABLE X.

Showing the probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges, and Deaths of the year.

CAUSES.	The Admissions.			The Discharges.						The Deaths.		
				Recovered.			Removed, Relieved or otherwise.					
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
MORAL.												
Religion .....	..	5	5	..	2	2	..	..	..	..	..	..
Family Trouble	5	4	9	1	2	3	..	..	..	..	3	3
Love	1	3	4	..	..	..	1	..	1	..	..	..
Poverty.....	..	..	..	..	1	1	..	..	..	..	..	..
Despondency .....	..	..	..	..	1	1	..	..	..	..	..	..
Fright .....	..	..	..	..	1	1	..	..	..	..	..	..
PHYSICAL.												
Intemperance	4	1	5	3	..	3	..	..	..	..	..	..
Weakness.....	3	..	3	..	..	..	..	..	..	1	1	2
Fever.....	2	1	3	1	..	1	..	..	..	..	..	..
Disease of the Brain	2	2	4	..	..	..	..	..	..	1	1	2
Injury to Head	4	..	4	1	..	1	..	..	..	2	..	2
Puerperal State .....	..	5	5	..	4	4	..	..	..	..	..	..
Epilepsy	8	1	9	..	..	..	..	..	..	2	..	2
Hereditary Tendency .....	..	1	1	..	1	1	..	..	..	..	1	1
Injury to Spine	1	..	1	..	..	..	..	..	..	1	..	1
Tape Worm .....	..	1	1	..	..	..	..	..	..	..	..	..
Sunstroke.....	1	..	1	1	..	1	..	..	..	..	..	..
Paralysis	1	..	1	..	..	..	..	..	..	..	..	..
Hysteria .....	..	1	1	..	..	..	..	..	..	..	..	..
Hydrocephalus .....	..	..	..	..	..	..	..	..	..	1	..	1
Not ascertained	51	58	109	22	20	42	4	2	6	20	23	43
TOTALS	83	83	166	29	32	61	5	2	7	28	29	57

TABLE XI.

Patients' Daily State and Employment. Average.

(Compiled from the Daily State Book, which is made up from the Ward Returns.)

OCCUPATION OR TRADE.	Daily Average No. of Patients.
<i>Male Patients.</i>	
Working Party. { With the Gardener and out-door Attendants...	50
With the Farm Attendants.....	12
With the Cowman.....	3
With the Carpenter	3
Upholsterer	3
Basketmaker	3
Tailor	12
Shoemaker	12
Matmaker	16
Painter	7
Engineer	1
Baker	3
House Attendant	6
Bath , ,	3
In the Dining Hall	7
Stewards Stores, Brewhouse, &c.....	6
Wards (cleaning)	50
<i>Daily Average number Employed</i>	<i>197</i>
<i>Female Patients.</i>	
In Laundry and Washhouse	50
Kitchen	7
Dining Hall	12
Wards, &c. (Cleaning)	40
(Needlework)	108
Vegetable Room	9
<i>Daily Average Number Employed</i>	<i>226</i>

ATTENDANCE AT—	DAILY ATTENDANCE.		
	M.	F.	TOTAL.
Sunday Chapel	180	240	420
Weekday , ,	270	280	550
School	18	20	38
Weekly Ball	100	90	190
Other Entertainments	130	120	250
Walk about Grounds	140	200	340
beyond , ,	80	110	190
on Terraces	150	280	430
<i>NIGHT REPORT.</i>			
Number of Wet Cases.....	5	7	12
Dirty	1	1	2
Noisy (at Night).....	3	5	8
<i>Average number Resident } (mean Annual Population) }</i>	<i>332</i>	<i>344</i>	<i>676</i>

TABLE XII.
THE ESTABLISHMENT.
OFFICERS.

Medical Superintendent	£500	Furnished Apartments, Coals, Vegetables, and Laundry.
Chaplain	200	
Clerk to Visitors.....	120	None.
Apothecary	110	
Asst. Med. Officer	150	
Clerk and Steward.....	150	
Housekeeper	60	Lodging, Board, Washing, and Attendance.
Head Attendant (Female Depart- ment)	70	
Ditto (Male ditto)	85	House, Coals, and Gas.

ATTENDANTS AND SERVANTS.

Clerk and Steward's Clerk £21	0	0	Board, Lodging, and Washing.
1 Male Attendant (Night)	62	0	
1 Ditto	Ditto ...	54 0 0	None.

Board, Lodging, and Washing:—

1 Male Attendant (Dining Hall)	40	0	0	1 Head Laundry Maid ...	20	0	0
1 Ditto	35	0	0	2 Laundry Maids	17	0	0
2 Ditto	34	0	0	1 Ditto	15	0	0
1 Ditto	33	0	0	2 House Porter & Wife...	51	0	0
1 Ditto	32	0	0	1 Cook	21	0	0
3 Ditto	31	0	0	1 Dairy Maid	15	0	0
3 Ditto	30	0	0	1 Kitchen Maid	15	0	0
2 Ditto	26	0	0	1 Housemaid	13	0	0
4 Ditto	25	0	0	1 Ditto	12	0	0
2 Ditto	24	0	0	1 Farm Attendant	28	0	0
2 Female Attendants (Night)	20	0	0	1 Ditto	24	0	0
2 Ditto	25	0	0	1 Store Porter and House Carter	28	0	0
1 Ditto (Dining Hall)	22	0	0				

*House, Coals, Vegetables, and
Gas :—*

1 Ditto	24	0	0				
1 Ditto	21	0	0				
2 Ditto	20	0	0	1 Engineer	1	15	0
2 Ditto	18	0	0	1 Bailiff	1	5	0
4 Ditto	17	0	0	1 Gardener	1	0	0
3 Ditto	16	0	0				
3 Ditto	15	0	0				
3 Ditto	12	0	0				
1 Ditto (Workroom) 21	0	0					

	per Week.		per Week.
Tailor.....	1 3 0	Painter and Glazier	1 10 0
Shoemaker	1 3 0	Blacksmith	1 5 0
Ditto	1 1 0	Stoker	1 0 0
Mat Maker	1 3 0	Ditto	0 18 0
Basket Maker	1 3 0	Cowman	0 17 0
Upholsterer	1 10 0	Cow Boy	0 9 0
Baker	1 5 0	Carter	0 17 0
Brewer	1 5 0	Carter's Boy	0 5 0
Butcher.....	1 0 0	Ditto	0 3 0
Under Garden Attendant	1 0 0	Stockman	0 15 0
Carpenter	1 10 0	Assistant Carter.....	0 16 0
Bricklayer.....	1 10 0		
Bricklayer's Labourer ...	0 15 0		

TABLE XIII.

Contract Prices of the Principal Articles of Consumption for the Year 1870.

ARTICLES.	QUARTERS ENDING			September.			December.		
	March.	June.	September.	£	s.	d.	£	s.	d.
Beef from Farm...	0	4	10	0	5	2
Mutton do.	0	5	4	0	5	6
Flour, Households	0	5	4	0	5	6
Seconds	1	12	5	2	0	11
Meal	1	9	11	1	18	5
Malt	1	3	5	1	10	11
Hops	3	8	0	3	2	6
Cheese	6	8	0	6	4	0
Butter	3	14	0	3	12	0
Bacon	5	10	0	4	19	0
Sugar, Raw	3	14	0	4	0	0
," Refined	5	10	0	4	0	0
Treacle	1	17	6	1	16	0
Soap, Yellow	2	10	0	2	10	0
," Soft	1	3	0	1	3	0
Coals, Wallsend	1	12	0	1	12	0
," Nixon's	0	19	6	0	19	6
Coke	1	1	4	0	18	3
				1	0	7	1	0	7
				0	13	11	0	13	0
				0	13	0	0	13	0

TABLE XIV.
DIET SCALE.

BREAKFAST, At 8.0 A.M.		DINNER At 1.0 P.M.		SUPPER, At 6.0 P.M.	
Males.	Females.	Males.	Females.	Males.	Females.
oz.	pt.	oz.	oz.	oz.	oz.
6	1	5	1	12	12
Sunday.....				... 8	... 8
Monday	6	1	5	... 1	... 8
Tuesday	6	1	5	... 12	... 4
Wednesday.....	6	1	5	... 16	... 4
Thursday.....	6	1	5	... 16	... 4
Friday	6	1	5	... 12	... 4
Saturday.....	6	1	5	... 8	... 4
Weekly Total...	42	7	35	7	28
				24	30
				12	12
				2	2
				16	16
				28	32
				12	12
				1	1
				1	1
				68	42
				7	7
				35	32
				7	7

TABLE XIV. *Continued.*
DINNTER.

	<i>Male Patients.</i>	<i>Female Patients.</i>	<i>Male Patients.</i>	<i>Female Patients.</i>
Sunday	Bacon and Suet Pudding, with Rice and Fruit in season.	Roast Meat, with Rice and Fruit in season.	Thursday	Roast Meat or Pickled Pork.
Monday	Mutton Broth or Bread and Cheese, (3oz).	Meat Pudding.	Friday	Meat Pudding.
Tuesday	Meat Pudding.	Meat Stew.	Saturday	Irish Stew.
Wednesday	Plum Dumpling and Treacle Sauce.	Meat Stew.		Meat Pudding or Bacon 4oz., with Suet Pudding 8oz.

Extra Diet for Sick.—Mince Meat, Steak, Mutton Chop, Fowl, Fish, Eggs, Mutton Broth, Beef Tea, Essence of Beef, Milk, Arrow Root, Rice Pudding, Batter Pudding, Sago, Barley Water, Gruel, Oranges, Biscuits, Calf's Foot Jelly, Porter, Bitter Ale, Port Wine, Sherry, Brandy, Gin, Whisky, Rum, Lemonade, Soda Water.

Extra Diet for Working Patients.— $\frac{1}{2}$ Pint Beer, 2 oz. Bread, 1 oz. Cheese, at 11 A.M., and $\frac{1}{2}$ Pint Beer at 4 P.M., the Laundry Patients $\frac{1}{2}$ Pint Tea. Tobacco and Snuff given as indulgences.

Attendants' and Servants' Diet.—Men, 1 lb. Uncooked Meat; Women, $\frac{3}{4}$ lb. ditto; 1 lb. Vegetables, 1 lb. Bread, 2 Pints Beer daily. 2 oz. Tea, $\frac{2}{4}$ lb. Sugar, $\frac{1}{4}$ Coffee, $\frac{1}{2}$ Butter, 1 lb. Cheese weekly. $\frac{1}{4}$ lb. of Meat may be exchanged for Pudding or Pie, at the discretion of the Housekeeper.

Cocoa for One Hundred Patients.— $3\frac{1}{4}$ lb. Cocoa, $6\frac{1}{4}$ lb. Treacle, 3 Gallons Milk, or more, if the Dairy yields it.

Coffee *Ditto* *Ditto* *Ditto* *Ditto*
 $1\frac{1}{2}$ lb. Coffee, $\frac{1}{4}$ lb. Chicory, 5 lb. Treacle, 2 Gallons Milk.
 $1\frac{1}{2}$ lb. Tea, 4 lb. Sugar, and 2 Gallons Milk.

Mutton Broth *Ditto* *Ditto* *Ditto* *Ditto*
 $\left\{ \begin{array}{l} \text{The Liquor of the Cooked Meat, Bones, &c., 25 lb. Meat, 3 lb. Scotch Barley, Oatmeal, Rice, 10 lb. Turnips,} \\ \text{Cabbage, Parsnip, Leek, Onion, Artichokes, or other Vegetables, Herbs, Salt, and Pepper.} \end{array} \right.$
Ditto *Ditto* *Ditto* *Ditto* *Ditto*
Dripping Crust, 31 lb. Flour, 50 lb. Potatoes, 13 lb. Meat.

Meat Pie *Ditto* *Ditto* *Ditto* *Ditto*
 25 lb. Meat, 25 lb. Flour—Boiled or Baked.
Meat Stew *Ditto* *Ditto* *Ditto* *Ditto*
Plum Pudding 100 lbs. weight. *Flour*, $46\frac{3}{4}$ lbs., Suet, $6\frac{1}{4}$ lbs., Raisins, $7\frac{3}{4}$ lbs. (Signed)

S. W. D. WILLIAMS, M.D.,

Medical Superintendent.

HAYWARDS HEATH, 31st December, 1870.

APPENDIX B.
CONTAINING A PAPER ON
FRACTURED RIBS IN THE INSANE,

BY
S. W. D. WILLIAMS, M.D.

Reprinted from "The Lancet," of Sept. 3, 1870.

TOGETHER WITH
OBSERVATIONS ON A PECULIAR CONDITION
OF THE BONES OF TWO INSANE PATIENTS
WHO HAD FRACTURED RIBS.

BY
EDWARD LATHAM ORMEROD, M.D.

Reprinted from the St. Bartholomew's Hospital Reports, Vol. VI.

APPENDIX B.

On Fractured Ribs in the Insane. By S. W. D. WILLIAMS, M.D.,
Medical Superintendent of the Sussex Lunatic Asylum, Hay-
wards Heath.

(Reprinted from the *Lancet*, of September, 3rd, 1870).

Two patients having died in the Sussex Lunatic Asylum lately, in the first of whom two ribs were fractured, and in the second one, very careful inquiry has been instituted as to the cause of these fractures. Remembering how much the public mind has of late been disturbed by the report of improper treatment in lunatic asylums, it has struck me that the cases are of sufficient importance for a *résumé* of the investigations and their results to appear in "The Lancet." In both cases, although death had resulted from natural causes, I applied for an inquest, and in both I obtained the valuable aid of Dr. Ormerod, physician to the Brighton Hospital, and Mr. Jowers, surgeon to the same hospital, in making the pathological examinations, and in giving evidence at the coroner's inquiry.

CASE 1.—S. L—, wife of a labourer, aged fifty-nine years, looking sixty-nine; never had any children; suffered much from menorrhagia thirteen years ago for three or four years, and has never recovered her former health, but remained weak, thin, and unfit for work.

State on admission (July 2nd, 1870).—Mentally she was in a state of melancholia of a very distressing character. Physically she had all the appearance of a person who was, or had been, suffering from some exhausting disease. She was painfully thin; her features were blanched and sharp, and her hair perfectly white.

Progress of case.—On the day after admission she became more excited; delusions gained possession of her that she was too wicked to live, and that she was unfit for anyone to approach her. She would throw herself violently on the ground, and cry and whine, and unless constantly watched would undoubtedly have seriously injured herself; yet, withal, she would do as she was told, and seldom or never resisted the nurses. She also refused to eat any food, but would drink liquids when they were held firmly to her mouth.

She remained in much the same state as this mentally, but getting physically weaker, until the 14th, when she became so extremely restless that it was necessary to place her in the padded room for some hours. During the time she was there, she employed herself in pulling the bed to pieces and lifting the floor pads about, fancying that she heard some one in the floor. On the 15th she was rather quieter. On the 16th she seemed much better mentally, but weaker physically; and she complained of tenderness in the chest on the right side. On examination, this tenderness was found to be due to a fracture of the fourth and fifth ribs, about an inch from the junction of the bone with the cartilage. On the 17th she was attacked with diarrhoea of a most intractable character, and which continued, almost without abatement and notwithstanding most active treatment, until the 26th, when she died from exhaustion. During the week previous to her death, a carbuncle formed on one shoulder, and an abscess under the right jaw, adding much to her debility.

Every possible inquiry was made, both when the injury was discovered and after her death, as to whether she had been ever ill-used, but without the shadow of a suspicion of any improper treatment being able to be detected. She herself, during a lucid interval some days before death, told me that she believed she hurt her side lifting the pads about in the padded room on the 14th, when she thought a man was in the boards.

A coroner's inquest was held on the 27th of July, and after several hours' careful inquiry, the following verdict returned:— “That deceased died from exhaustion from diarrhoea, accelerated by a fracture of two ribs on the right side; and the jurors further say that such fracture of the ribs was occasioned by the action of the deceased, and is not attributable to improper treatment or neglect of the deceased by the officers or attendants of the asylum.”

The only evidence I need trouble the readers of this with is that of Mr. Jowers. It was as follows, and is copied out of the “Sussex Express”:

“Mr. Frederick William Jowers deposed—I am a surgeon to the Brighton Hospital. I was present at the examination of the body of the deceased this morning. The outward appearances were those of an ill-nourished and very feeble old woman. There was a carbuncle on the right shoulder, and an abscess below the lower jaw. There were no signs of bruising or violence of any kind. On examining the chest, two ribs were found broken on the right side. There was a slight amount of inflammation of the lungs and pleura

in the neighbourhood of the fracture. The bones were excessively brittle, so much so that with a slight pressure of my thumb I broke one rib on the left side. Those were all the appearances worthy of note. The heart was feeble and soft, and every other organ in the same state. I attribute death to exhaustion consequent on the diarrhoea. I have no doubt the fractured ribs contributed to her death, but there was nothing about them which in a strong and healthy person need have shortened life. My opinion is, that in one of her falls, or more probably by muscular action on the night of the 14th, in lifting the pads about, these brittle ribs gave way. There were no external marks where the ribs were broken. At this distance of time I should not expect to find any."

CASE 2.—J. C.—, aged forty-six years, widowed; an inn-keeper. His insanity, which had been coming on for some time, was supposed to be due to drink and dissipation.

State on admission.—He had the usual symptoms of a person suffering from the second stage of general paralysis of the insane. Mentally he was bordering on dementia; and, although he looked stout and well nourished, he was very helpless, falling about whenever he attempted to move, and generally exhibiting a marked want of consentaneity in the use of his muscles.

Progress of case.—After admission he became very restless and excitable; and every other day for some time he suffered from an exacerbation of the mental symptoms, and it would then be necessary to seclude him in the padded rooms, otherwise, as he was so restless and helpless, he would have come to harm. On the 28th he was extremely excited in the morning; but towards midday a change took place, and he gradually lapsed into a state of coma, from which he never rallied, but died on the evening of the 29th. When this fatal change took place he was carefully examined, and by chance a fracture of the sixth rib on the left side, about half an inch from the cartilage, was detected. There was no displacement of bone, and not a trace of any bruise or injury to the soft parts, either in the neighbourhood of the fracture or in any other part of the body. Mr. Jowers again made the *post-mortem* examination, and Dr. Ormerod carefully examined the bones microscopically. I append their evidence as given before the coroner, and as it appeared in the "Sussex Express":—

"Mr. Frederick William Jowers, surgeon, of Brighton, and one of the surgeons to the Sussex County Hospital, deposed—I was present at the examination of this patient on the afternoon of Friday last. There were no marks of bruises or violence to be seen on the body. On examining the chest, there was found a simple

fracture of the sixth rib on the left side. The skin, the fat, and the muscles overlying this fracture were in a perfectly healthy state, as were also the lining membrane of the chest inside, the covering of the lung, and the lung itself. What I mean to express is, that there were no signs of violence. There was no displacement ; the bones were lying in their places. The ribs were remarkably brittle, snapping like a dry twig upon the slightest pressure. My opinion is this fracture was caused by some irregular muscular contraction, acting suddenly upon this diseased rib, and that the fracture had nothing at all to do with the death. I have no doubt, having heard Dr. Williams's evidence, that deceased's death was due to natural causes. I might add that these cases of fracture from muscular action are not unknown to surgeons. I once attended a gentleman in Brighton who broke his arm from simply tossing some biscuit to a boy ; also a lady who broke her leg from turning in bed."

"Dr. E. L. Ormerod, physician at Brighton, deposed—I have examined a portion of one of the ribs of deceased. The bone was to all appearance healthy on a general examination, but there was a crack across it near the sternal end. The crack was on the outer side. The bits of bones were exactly in position ; and on bending it more to examine this crack, I heard it extend, showing that the fracture was not quite through. The appearances inside the bone were very like those which I had seen in the ribs of the patient who had died here a few days before. The changes in the last specimen were not so far advanced as the previous one ; but they were essentially the same, consisting of the removal of the internal structure of the bone, leaving only a thin outer shell of bone, which was to a greater or less extent infiltrated with fat and in the process of degeneration. I have no doubt that the fracture of the bone arose from its great brittleness, rendering it liable to be broken from causes quite insufficient to break a healthy bone. From the position of the fracture, occupying the outside of the bone, I do not think it could have arisen from direct local violence ; I think much more likely from muscular action. Even healthy bones will break from such a cause. I have seen the thigh of a racehorse broken from such a cause. The disease which appeared in these two patients is well known to anatomists as mollities ossium, occurring in the subjects of any exhausting diseases, as cancer or after child-birth. It is not generally known to occur in insane patients, nor is it known whether it is confined to the ribs in them ; probably not."

The verdict in this case was as follows :—"That deceased died from natural causes on the 28th of July, from general paralysis of the insane : that he received every attention while in the asylum ;

that he had sustained a fracture of the sixth rib, but it arose from the diseased state of the bone, and was not attributable in any way to the neglect or improper treatment on the part of the officers or the attendants of the asylum."

Remarks.—I cannot but think that the history and examination of these two cases will not only go far to explain the frequency of fractures of the ribs in asylums, but may also to some extent help to relieve the press and the public mind of some of the doubts that lately been expressed as to the treatment of lunatics in asylums. I would not, however, wish it to be inferred that I think the treatment of patients in asylums perfect. Far from it. Where do we find perfection? Neither can I for a moment subscribe to the, to me, absurd hypothesis that lunatics' ribs are more brittle than other people's. But here are two cases in which, after most careful and separate investigations by the visiting justices, the coroner, and myself, not the slightest ill-treatment can be detected. Indeed, neither of the patients was of the class of cases likely to be ill-used, as neither of them was very violent, and the only trouble they gave was from their fears and helplessness. And yet one had two ribs broken, and the other one. The explanation of this is, I think, clear. The woman had suffered from an exhausting disease some years ago, and had been a confirmed invalid ever since. The man had had syphilis severely, had been a drunkard, and was in an advanced stage of general paralysis. They were, therefore, both cases in whom we might expect to find the state of bone Dr. Ormerod has so minutely described to us in the "British Medical Journal" of September 10th, 1859. This, after careful examination, Dr. Ormerod himself fully bears out; and I also can from personal observation bear testimony to. As Mr. Jowers said, the ribs of the woman snapped like a dry twig, and I saw him push a small scalpel through a rib of the man almost as easily as if it had been only a shell. Therefore, the diseased state of the bones being allowed—and I think that after such experienced evidence as Dr. Ormerod's that cannot be disputed,—I consider we may be fully justified in reasoning that a small amount of force during life might have broken the ribs of these patients, and that it is quite possible, remembering the very restless, aimless ways these poor creatures had, the fractures may have been due to irregular muscular action. Indeed, it must be remembered that the woman ascribed her injury to such a cause, distinctly telling me, as I have already stated, that she did it on the night of the 15th of July, when lifting the heavy pads about in the padded room.

I have purposely refrained from detailing the medical treatment pursued in these cases, thinking it foreign to the point at issue, and that it would only tend unnecessarily to swell the bulk of this communication.

Haywards Heath, August, 1870.

Observations on a peculiar Condition of Bones of two insane Patients who had fractured Ribs. By EDWARD ORMEROD, M.D., Cantab., Senior Physician to the Sussex County Hospital.

(Reprinted from *St. Bartholomew's Hospital Reports*, Vol. VI.)

THE frequent occurrence of fracture of the ribs in the inmates of Lunatic Asylums has recently attracted much attention. And the more attention has been called to it, the more frequent does the occurrence seem to have become. This fact alone would make one suspect that the injury was not due to improper violence on the part of the attendants. Without, however, entering into this question, I propose here merely to record the results of my examination of the bones of two patients who lately died in the Sussex County Lunatic Asylum with fractured ribs. Whether or no further observation may justify a wider extension of the conclusion that the bones break so readily because they are diseased, at least I cannot hesitate to adopt it in the present instance.

I am indebted, as on many other occasions, so here also, to my friend and colleague, Mr. Jowers, for the opportunity of examining these bones. And I gratefully acknowledge the prompt kindness with which Dr. Williams, the Medical Superintendent, at once fell in with my wishes, and placed at my disposal the means for making the inquiry, in which he heard that I was engaged, as complete as possible.*

The subjects of this accident were of very different habit. One was a little shrunken woman, looking quite seventy, though no more than fifty-eight years old. She had been in the asylum for about

* I was not aware, when I was engaged in these observations, that the subject had been investigated by the late Mr. Dalrymple ("Dublin Quarterly Journal," New Series, vol. ii., p. 85) and Mr. Durham ("Guy's Hospital Reports," Third Series, vol. x., p. 348). I am gratified to find my independent conclusions confirmed in their papers. Only I must differ from Mr. Dalrymple in regarding the large bone-cells without fringes as young and active, not effete organisms.

one month, suffering from restless rather than violent mania. She had been confined in the padded room about a fortnight before her death, and it was supposed that she fractured her ribs by her own muscular exertions at that time. The injury was known of before death, and on examination of the body, the fourth and fifth right ribs were found broken about three inches from their sternal extremities, the fractured ends being loose and bathed in pus. The other patient, in whom the changes of the ribs were less marked, was a man forty-six years old, short and fat, suffering from dementia and general paralysis of the insane. He had been an inmate of the asylum for six weeks. Two days before his death a fracture of the sixth left rib, about two inches from the sternal end, was discovered. A *post-mortem* examination revealed the ends of the bone in close apposition. Other ribs of both these patients were brittle, breaking under a force quite inadequate to fracture healthy ribs, and soft, allowing a scalpel to be passed through them. The costal cartilages were less advanced in ossification than was to have been expected at the ages of either of these patients.

Beside the fractured ribs, there were sent me a left clavicle, a portion of the left femur, and two other ribs from the second patient. These bones differed strangely from some bones of a patient aged twenty-five years, dying of phthisis, which I procured for the sake of comparison. They were dark, singularly wet and greasy, unusually advanced in decomposition. And, as sections from the diseased, and from what we will call the healthy, bones lay macerating in different jars, the distinctive characters were still preserved. The sections from the phthisical bones grew whiter and harder, while those from the bones of the insane patient remained dark and rotten, and very offensive, day by day. On any pressure of the ribs from the insane patient dark blood oozed from the comparatively large vessels on their surface, and when forcibly bent they snapped suddenly across with a clean fracture, the edges standing sharp and smooth all round, like a hemlock stalk, without splintering. Within they contained medullary tissue, softer and darker than usual. In the neighbourhood of the fracture in the first patient I did not happen to notice any difference, but in the second patient the neighbouring medullary tissue was pale and slightly infiltrated with pus. No further indication of any attempt at repair could be traced in either of them.

The appearance of a transverse section of one of these ribs was very remarkable when laid by the side of a section from the corresponding rib of a woman aged twenty-five years, who had died of phthisis, and still more so when compared with the correspond-

ing rib taken at random from the Museum stores. The first thing that struck one was, that the diseased rib was so much larger than a healthy rib, as if the loss of substance within had been to some extent made up by a deposit of bone on the outer surface. And this view was favoured by the observation of numerous bone-cells, as of growing bone, not yet stretched and withered into lacunæ and canaliculi, lying in the subperiosteal laminæ. The centre of the bone was traversed by a very light open net-work made of the fewest possible slips of osseous tissue. All the strength of the bone lay in its outer shell of compact tissue, which yet was no thicker than cardboard.

Great difficulty was found in procuring a specimen to display its microscopic structure satisfactorily. For the bone yielded, like a section of hoof, instead of wearing away under the pumice. A section of the right thickness to display the structure of a healthy bone showed nothing at all of the structure of these bones, the field was so clouded. And though, by one means or other, at last the oil was removed, yet the specimen remained obscure till it had been made very thin indeed ; and then the obscurity was found in great measure to be due to a general granular condition of the laminæ. There were minute oil-globules floating all about the field, but, besides, the bone was finely granular, distinctly more so than in specimens of healthy bone prepared in the same way, and procured, to avoid every chance of error, at the same recent date. This granular structure affected no uniform arrangement, and I know of nothing which it more exactly resembled than the granular appearance to be seen at the ossifying edge of cartilage and in new bone. Like this it was unaffected by ether and benzol, but, unlike this, it was almost entirely removed by dilute hydrochloric acid, which dissolved the earthy constituents of the bone. It was most marked in the laminæ immediately surrounding the Haversian canals, in which laminæ, coincidently, the lacunæ and canaliculi were comparatively ill-marked or altogether wanting. I suppose that this granular marking was due to an integral change of the substance of the laminæ. Another instance of some general integral change was supplied by the presence of numerous irregular fissures between the laminæ, chiefly those which filled up the spaces between the Haversian systems. This appearance explains to some extent the loose yielding structure of the bone already alluded to.

Immediately beneath the periosteum, where the laminæ followed the general outline of the bone, the laminæ and canaliculi were normal. But farther in, where the Haversian systems began, the structural arrangement of the bone was seen to have undergone a

change. The Haversian systems were comparatively small, and though individually more numerous, occupied a more limited range. And here and there it seemed as if, near the medullary edge, one or two of the Haversian systems have dropped out, leaving large holes bounded by septa of osseous tissue not more than two or three laminæ in width. On these septa the disposition of the canaliculi was normal, as it was on the peripheral laminæ; but deeper within the systems the canaliculi seemed to be set more closely than in the corresponding part of healthy bone, and, as a necessary consequence of this, to run more nearly parallel to one another. I would not, however, insist upon this, for, as a rule, the deep-seated laminæ in healthy bone contrast in this particular with the laminæ more immediately beneath the periosteum, so that this peculiar disposition, even admitting the correctness of the observation, would be no more than an exaggeration of the normal typical distinction between the laminæ and canaliculi of the Haversian system and of the surface, respectively, of any long bone.

But the large size of the central aperture—that is to say, of the Haversian canal—was a point about which there could be no mistake. And this was most remarkable, indeed it was probably the most characteristic point in the whole series of changes which I am describing. The aperture, or, more correctly speaking, what should have been such, was filled with an opaque material marked with a few oil-globules. A longitudinal section of the outer shell of the ribs confirmed and explained this observation, showing the Haversian canals to be generally, but unequally and irregularly, dilated. Some of them had a distinct lining membrane, with an obscure spiral marking.

I have said that there was a difference in degree between the specimens obtained from these two patients respectively. The disease was much further advanced in the first than in the second patient, and again, from whatever cause, the change was much more marked in the ribs of the last patient than in the femur or the clavicle. Still the same process could be traced in sections of both these bones, and the conclusions drawn from these observations confirmed those drawn from examination of the ribs. The entire bones, indeed, were too thick and strong to allow one to measure their brittleness by the same ready means by which I could guess at the strength of the ribs. And there was not such conclusive evidence of internal absorption. But there was the same difficulty in obtaining a transparent section, and from the same cause—the structure being obscured by the abundance of oily particles and by a general granular condition of the bony laminæ.

As in the ribs, the periosteal laminæ preserved their integrity and, with this, the form of their lacunæ and canaliculi.

From a review of the observations of these two cases, it may fairly be inferred that the brittleness of the ribs depended on a morbid condition of the bones, and that this condition was general, affecting different parts of the osseous system coincidently, though more marked in the ribs than in some other, more compact, bones. The process was essentially one of absorption of the internal structure of the bone; the osseous tissue being replaced by an excessive deposit of the fatty matter normally existing in its interior. And it was effected by the same steps as external absorption follows.* Thus, the usually invisible membrane lining the Haversian canals, and forming the coats of the vessels lying there, was thickened into a membrane of cognisable structure and dimensions. The space for this thickening was obtained by removal of the innermost concentric laminæ; and from this point a change was propagated which resulted in or tended to the removal of each entire Haversian system. Besides, a change seemed to have crept over the whole bone, showing itself in the loosening of the mutual connections of the laminæ, and in an obscure disintegration of the osseous structure itself. And this was accompanied by a general infiltration of oily matter into the substance which had intruded itself within the Haversian canals, and into whatever part of the compact structure of a bone could find room for it. So far is clear; but I must be allowed to hesitate before giving any precise opinion as to the real import of the molecular disintegration, and so far anticipating the possible results of an inquiry which still occupies much of my leisure. And the more so now that an available source of supply of diseased bones seems to have offered itself in the inmates of lunatic asylums, whereby all the previous inferences may be corrected or confirmed.

The connection between insanity and a wasting of the phosphates of the osseous system is readily intelligible on general, though somewhat conjectural, grounds. Yet I would not be understood to assert unconditionally that the changes which I have described are peculiarly liable to occur in lunatics; for were it even established by statistics that a brittle condition of the bones, whatever we may choose to call it, is more common among the insane than among the sane, still we must remember that the causes to which we somewhat vaguely refer this change of the osseous system are counted also among the predisposing causes of insanity. Such are want, disease, distress of body and mind, old age, and all that brings on prema-

* Virchow, "Cellular Pathologie," S. 379, 2te Auflage.

ture old age. And these might induce this change of the bones without any intermediate mental affection; so that the mental and the physical effect might be common results of the same cause and mutually independent. Again, the unhappy circumstances of insane persons render their brittle ribs more liable to fracture. For a rib which would last a feeble, quiet, bedridden patient to the end of his days, might readily break under the wayward movements of a lunatic and the mechanical restraints, however gently and judiciously applied, necessary to control these movements. And, lastly, it may be added that a fracture which would pass unnoticed in a private family becomes most properly the subject of public judicial inquiry when it occurs in the inmate of a lunatic asylum. Until further observation has cleared up this point, the attendants of the insane will remain under the painful suspicion of having done by violence what will be found, I believe, really to have been due to disease of the bones.



